

# Marietta 2-Day Regional Workshop

6.00 Contact Hours Each Day for Wastewater

*This valuable continuing education event is intended  
for certified and non-certified personnel*

**Wednesday, March 14, 2018  
&  
Thursday, March 15, 2018**

## HELD AT:

The Lafayette Hotel  
Mississippi/Delta Queen Room  
101 Front Street  
Marietta, Ohio 45750

This training is offered in partnership with  
The West Virginia Training Center



A 501(c)(3) non-profit organization

*"Ohio's Environmental Training Center"*



A 501(c)(3) non-profit organization

OPERATOR TRAINING COMMITTEE OF OHIO INC.  
3972 Indianola Avenue \* Columbus, OH 43214  
(614) 268-6826 Phone (614) 268-3244 Fax  
[www.otco.org](http://www.otco.org)

OPERATOR TRAINING COMMITTEE OF OHIO, INC.  
3972 Indianola Avenue  
Columbus, OH 43214-3158

## TO REGISTER

Registration Fee: \$150 for one day

Registration Fee: \$275 both days

Registration fees include refreshments, lunch, handouts, and students training records in the OTCO Transcript website. A \$25 late fee may be applied to registrations received after **March 9, 2018**.

To register for this event, send your completed registration form by mail, fax, or email. Once your registration is processed, OTCO will email or fax students a confirmation.

Payment for this event can be made by check, or credit card. In order to invoice your company, a Purchase Order must accompany registrations.

## CANCELLATIONS

Cancellations received in writing 72 hours before the event will receive a full refund. Substitutions are permitted; however, NO REFUND FOR THOSE WHO REGISTER AND FAIL TO ATTEND

Send written cancellations to:

[otco@otco.org](mailto:otco@otco.org) or Fax: (614) 268-3244

## NOTICE 1ST DAY ATTENDEES

Please bring a basic calculator and if possible your facility's weir and flume design and measurements.

## CONTACT HOURS

The approval numbers for this event are new for 2018 and are not duplicates from previous OTCO presentations. Contact Hours will be included in the students' official OTCO transcript.

<https://www.otco.org/student-transcript.html>

## OHIO EPA EBIZ

Since September 2017, OTCO has been maintaining your contact hours provided by OTCO in your Ohio EPA Ebiz account.

## CONTACT HOURS TO GO!

Attendees who complete both days of training shall receive one online course for additional contact hours:  
*Recommended Standards for  
Wastewater Treatment Facilities (2004) DLC (Internet)*  
OTCO-S12635-OM (6.00 hours)

The course can be used by either the attendee or an employee of the same organization.



**MARIETTA REGIONAL WORKSHOP  
WEDNESDAY, MARCH 14, 2018 DAY-1**

(6.0 Contact Hours for Wastewater & Collection Systems)

**7:30am Registration and Coffee**

**7:50am Welcome and Update**

*Pat Antonelli, OTCO Director of Special Projects*

**8:00am Filamentous Bacteria**

*Filamentous Bulking characteristics review; Common causes: grease, sludge age, sulfides; Key characteristics description & examples; Sulfur granules; Attached bacterial growth; Branching options; Cell size and length; Case histories - small groups will review plant data and micro photographs to troubleshoot problems and suggest solutions*

**OTCO-S13049-OM (1.50 hours)**

*Richard Weigand, Microbiologist*

*WVETC Training and Compliance Specialist*

**9:30am Break**

**9:45am By the Numbers—Calculations That Matter**

*Process control data benefits discussion; Review calculations and formulae such as SVI, plant loading, MLSS inventory, DT; Review and dissect actual plant data and process control; Using case histories, select useful calculations to troubleshoot plant problems and discuss solutions*

**OTCO-S13050-OM (1.50 hours)**

*Richard Weigand, Microbiologist*

*WVETC Training and Compliance Specialist*

**11:15am Lunch (Provided)**

**12:00pm Flow Measurements & Flow Meter Calibrations**

*Basics of open channel flow measurement: Understanding primary devices, Weir and flume options: Calibration and inspection of primary devices: Secondary device installation: Hands-on practice in small groups measuring table top models and working through calibration procedures*

**OTCO-S13051-OM (1.50 hours)**

*Richard Weigand, Microbiologist*

*WVETC Training and Compliance Specialist*

**1:30pm Break**

**1:45pm Phosphorous Removal – Biological Or Physical/Chemical?**

*Phosphorous chemistry and components; Phosphorous as a pollutant; discharge limits; Treatment options currently in use; Biological Phosphorous removal – PAOs and how they function: Anaerobic and oxic zones, Solids removal: Physical/chemical Phosphorous removal, Coagulation and flocculation, Chemical feed options, Solids removal options*

**OTCO-S13052-OM (1.50 hours)**

*Richard Weigand, Microbiologist*

*WVETC Training and Compliance Specialist*

**3:15pm Adjourn**

**MARIETTA REGIONAL WORKSHOP  
THURSDAY, MARCH 15 DAY- 2**

(6.0 Contact Hours for Wastewater & Collection Systems)

**7:30am Registration and Coffee**

**7:50am Welcome and Update**

*Pat Antonelli, OTCO Director of Special Projects*

**8:00am Understanding the Components**

*-Identify various components of the extended aeration system and review how they work, including pretreatment devices, aeration chamber, settling chamber, and tertiary treatment.  
-Additional components discussed will include, sludge holding, equalization chambers and chlorine and ultraviolet disinfection.  
-Lecture on these components as to how they function in the treatment of wastewater and the required operation and maintenance of the components to ensure they continue to operate properly.*

**OTCO-S13053-OM (1.50 hours)**

*Rick Smith, Environmental Specialist II*

*USEPA 109(b) & Ohio EPA Compliance Assistant Unit*

**9:30am Break**

**9:45am Controlling the Components**

*Conversion and separation of organic material and solids in wastewater. The tools and methods used to monitor and control the process.*

**OTCO-S13054-OM (1.50 hours)**

*Rick Smith, Environmental Specialist II*

*USEPA 109(b) & Ohio EPA Compliance Assistant Unit*

**11:15am Phosphorus Control**

*-what is phosphorous  
-Waste plant efficiency helping to control "P" discharge  
-Conventional chemical addition for added control and associated problems  
-New chemical product for "P" control  
-Conclusion/questions*

**OTCO-S13055-OM (1.00 hours)**

*Bob Hockstok, Aqua Science*

**12:15pm Lunch (Provided)**

**1:00pm Operator Certification & E-biz Update**

**OTCO-B13056-OM (1.00 hours)**

*Tansuhree Courlas, Environmental Supervisor*

*Ohio EPA Operator Certification and Resiliency*

**2:00pm Break**

**2:15pm What the best operator can't control. I&I ideas. Fill with Polymer Stuff?**

*-what is I and I  
-how does it get into the system  
-what to do to reduce I & I without spending a lot of money  
-How to save your plant*

**OTCO-S13057-OM (1.50 hours)**

*Bob Hockstok Technical Representative*

*Aqua Science*

**3:15pm Adjourn**

**OTCO REGISTRATION FORM**

Marietta 2-Day Regional Workshop  
*This valuable continuing education event is intended for certified and non-certified personnel*

**Register online at:**

<https://www.otco.org/marietta-workshop-registration.html>

You **MUST** check which day(s) you wish to attend:

Wednesday, March 14, 2018 **(\$150)**

Thursday, March 15, 2018 **(\$150)**

March 14 & 15, 2018 **(\$275)**

OTCO STUDENT ID #:	
FIRST NAME	
LAST NAME	
TITLE	
EMPLOYER	
ADDRESS (1)	
ADDRESS (2)	
CITY	
STATE	ZIP
BUS. TELEPHONE ( )	- ext
FAX ( )	- (For confirmations)
EMAIL ADDRESS (For confirmations)	
Please check & initial if the above information needs to be updated in the OTCO Training Tracking System. <input type="checkbox"/>	
CHECK/MONEY ORDER #	
P.O. #	
<input type="checkbox"/> Please invoice my company	
Charge to my credit card account:	
<input type="checkbox"/> Visa <input type="checkbox"/> MasterCard <input type="checkbox"/> Discover <input type="checkbox"/> AMEX	
3 digit verification (For security purposes)	
CARD NUMBER:	
NAME ON CARD	
EXP. DATE /	CCV Code:
X _____	
CARD HOLDER SIGNATURE	

**MAIL OR FAX THE COMPLETED FORM TO**

OPERATOR TRAINING COMMITTEE OF OHIO,

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